

## PATENT ABSTRACTS OF JAPAN

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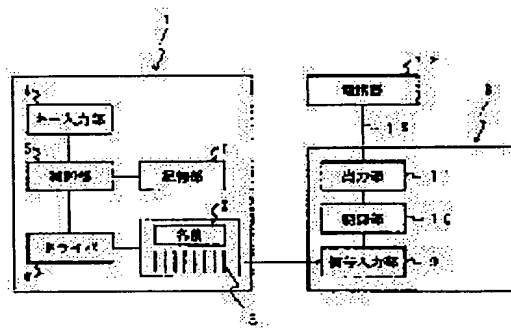
(72)Inventor : KISHI SHIGENOBU  
YONEZAWA TATSUSHI  
KINOSHITA MASAHIRO  
SASAKI SHUNKICHI

## (54) TELEPHONE NUMBER STORAGE AND READING DEVICE

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To improve the security by displaying a telephone number in a bar code so as to prevent the telephone number from being easily known by a 3rd party because telephone numbers entered in an electronic notebook are otherwise displayed in numerals.

**SOLUTION:** A control section 5 is operated by operating a data entry operation section 4 of an electronic notebook 1 to call a name and a telephone number stored in a storage section 7 by a command of the control section 5 and to drive a driver 6 thereby displaying the name on a name display section 2 consisting of a liquid crystal display screen and displaying the telephone number onto the telephone number display section 3 in a bar code. Then a bar code reader 8 reads the telephone number indicated in the bar code on the telephone number display section 3 of the electronic notebook 1, the telephone number is outputted to a telephone set 12 from an output section 11 by a command of a control section 10 connecting to a signal input section 9 to allow the telephone set 12 to call an opposite party.



## LEGAL STATUS

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[Patent number]

[Date of registration]

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## CLAIMS

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### [Claim(s)]

[Claim 1] The telephone number storage and reader characterized by having the telephone number storage which displays the telephone number by the bar code.

[Claim 2] Telephone number storage and a reader according to claim 1 equipped with the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store, operates telephone, and calls a partner.

[Claim 3] The telephone number storage and reader according to claim 1 with which said telephone number storage was equipped with the telephone number display which drives by the key input section, the control section connected to this key input section, the driver which drives a telephone number display by the command of this control section, and this driver, bar-code-izes the telephone number and displays it, and the storage section which was connected to said control section and has memorized a name and the telephone number at least.

[Claim 4] The telephone number storage and reader according to claim 2 with which said telephone number reader was equipped with the signal input part which reads the telephone number by which the telephone number display of said telephone number store was bar-code-ized, the control section connected to this signal input part, and the output section which outputs the telephone number to telephone by the command of this control section.

[Claim 5] Telephone number storage and a reader according to claim 1 equipped with the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store, and carries out digital display of the telephone number.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the telephone number storage and reader which is the combination configuration of telephone number stores, such as an electronic notebook, and an account reader of the telephone number like a bar code reader.

[0002]

[Description of the Prior Art] Conventionally, according to the electronic notebook as telephone number storage, the telephone number inputted into this electronic notebook was displayed numerically.

[0004]

[Problem(s) to be Solved by the Invention] However, if it was in the above-mentioned Prior art, since the telephone number inputted into the electronic notebook was displayed numerically, others might get to know this telephone number easily, and the trouble of being scarce was in security nature.

[0005] The place which accomplishes this invention paying attention to the above-mentioned trouble, and is made into that purpose is to offer the telephone number storage and reader which bar-code-izes the telephone number, displays it, is not easily known by others in this telephone number, and raised security nature.

[0006]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 1 are characterized by having the telephone number storage which displays the telephone number by the bar code.

[0007] Since the bar-code-ized telephone number is displayed on said telephone number display by this configuration, others do not know this telephone number easily and security nature improves by it.

[0008] Moreover, in order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 2 were equipped with the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store, operates telephone, and calls a partner in telephone number storage and a reader according to claim 1.

[0009] Actuation of telephoning becomes unnecessary, in order to read the telephone number by which the telephone number display of said telephone number store was bar-code-ized, to operate telephone and to call a partner by this configuration with about [ that an operation of invention of claim 1 and the same operation can be done so ], and said telephone number reader.

[0010] In order to attain the above-mentioned purpose, moreover, the telephone number storage and reader concerning invention of claim 3 In telephone number storage and a reader according to claim 1 said telephone number storage The key input section, The control section connected to this key input section, and the driver which drives a telephone number display by the command of this control section, It drove by this driver and had the telephone number display which bar-code-izes the telephone number and displays it, and the storage section which was

connected to said control section and has memorized a name and the telephone number at least.

[0011] By this configuration, an operation of invention of claim 1 and the same operation can be done so.

[0012] Moreover, in order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 4 were equipped with the signal input part where said telephone number reader reads the telephone number by which the telephone number display of said telephone number store was bar-code-ized, the control section connected to this signal input part, and the output section which outputs the telephone number to telephone by the command of this control section in telephone number storage and a reader according to claim 2.

[0013] By this configuration, an operation of invention of claim 2 and the same operation can be done so.

[0014] Moreover, in order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 5 were equipped with the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store, and carries out digital display of the telephone number in telephone number storage and a reader according to claim 1.

[0015] By this configuration, he can display the telephone number which this telephone number reader read into about [ that an operation of invention of claim 1 and the same operation can be done so ], and said telephone number reader, and can see and telephone this telephone number.

[0016]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained based on a drawing. The perspective view of the telephone number storage and reader concerning this invention in drawing 1, the block diagram of the internal configuration of the telephone number storage and reader concerning this invention in drawing 2, and drawing 3 are the perspective views of the telephone number storage of the telephone number storage and reader concerning this invention.

[0017] The identifier display 2 to which the electronic notebook 1 as telephone number storage in the telephone number storage and reader concerning this invention changes from a liquid crystal screen to the surface section, the telephone number display 3 which consists of a liquid crystal screen and indicates the telephone number by the bar code, and the control unit 4 for data inputs are formed.

[0018] And the electronic notebook 1 is equipped with the key input section which is the control unit 4 for data inputs, the control section 5 which consists of microcomputers, the driver 6 which drives the identifier display 2 and the telephone number display 3 by the command of this control section 5, and the identifier display 2 and the telephone number display 3 driven by this driver 6, and the storage section (memory, such as IC) 7 which has memorized the telephone number etc. is connected to said control section 5.

[0019] A bar code with the combination of the bar and tooth space where sizes differ Express a figure in a decipherable form mechanically, for example, one unit (module) of a white bar is set to 0. There are an approach (JAN symbol) of setting one unit (module) of a black bar to 1, and expressing a single digit in the combination of 0 and 1 of seven units in total, the approach (NW-7) of not being concerned with black and white, but setting a thin bar to 0, setting a \*\* bar to 1, and expressing one character with a total of seven bars, etc.

[0020] Moreover, the bar code reader 8 as a telephone number reader of telephone number storage and a reader is equipped with the signal input part 9 which reads the telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized, and does the signal input of this, the control section 10 connected to this signal input part 9, and the output section 11 which outputs the telephone number by the command of this control section 10, and this output section 11 is connected to telephone 12 in code 13. In addition, this bar code reader 8 may be built in telephone 12.

[0021] Next, combination with telephone explains actuation of the telephone number storage and reader constituted as mentioned above.

[0022] By operating the key input section which is the control unit 4 for data inputs of said

electronic notebook 1, a control section 5 is operated, the name and the telephone number which the storage section 7 is made to have memorized by the command of this control section 5 are called, a driver 6 is driven, and the telephone number is indicated by the bar code at the telephone number display 3 which changes a name from a liquid crystal screen to the identifier display 2 which consists of a liquid crystal screen.

[0023] Next, the telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized is read with a bar code reader 8, the signal input of this is carried out in a signal input part 9, and the telephone number is outputted to telephone 12 from the output section 11 by the command of the control section 10 connected to this signal input part 9. And telephone 12 operates and a partner is called.

[0024] Since the bar-code-ized telephone number is displayed on the telephone number display 3 of said electronic notebook 1 according to the above-mentioned gestalt of operation It is not easily known by others, and security nature improves, and this telephone number with moreover, the bar code reader 8 The telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized is read, and actuation of telephoning becomes unnecessary, in order to operate telephone 12 and to call a partner.

[0025] In addition, with the above-mentioned gestalt of operation, the telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized is read with a bar code reader 8. Although carry out the signal input of this in a signal input part 9, the telephone number is outputted to telephone 12 from the output section 11 by the command of the control section 10 connected to this signal input part 9, telephone 12 operates and the partner was called As the telephone number which sounded dial tone from said electronic notebook 1, and you may make it telephone from the earphone of telephone 12, and this bar code reader 8 read into said bar code reader 8 is displayed, this telephone number is seen, and you may make it telephone.

[0026]

[Effect of the Invention] Since the bar-code-ized telephone number is displayed on said telephone number display by having had the telephone number store which displays the telephone number by the bar code according to the telephone number storage and the reader concerning invention of claim 1 as explained above, others do not know this telephone number easily and security nature can be raised.

[0027] Moreover, according to the telephone number storage and the reader concerning invention of claim 2 By having had the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store in telephone number storage and a reader according to claim 1, operates telephone, and calls a partner Actuation of telephoning becomes unnecessary, in order to read the telephone number by which the telephone number display of said telephone number store was bar-code-ized, to operate telephone and to call a partner with about [ that the effect of the invention of claim 1 and the same effectiveness can be done so ], and said telephone number reader.

[0028] Moreover, according to the telephone number storage and the reader concerning invention of claim 3 In telephone number storage and a reader according to claim 1 said telephone number storage The key input section, The control section connected to this key input section, and the driver which drives a telephone number display by the command of this control section, An operation of invention of claim 1 and the same operation can be done so by having driven by this driver and having had the telephone number display which bar-code-izes the telephone number and displays it, and the storage section which was connected to said control section and has memorized a name and the telephone number at least.

[0029] Moreover, according to the telephone number storage and the reader concerning invention of claim 4, in telephone number storage and a reader according to claim 2, said telephone number reader can do so an operation of invention of claim 2, and the same operation by having had the signal input part which reads the telephone number by which the telephone number display of said telephone number store was bar-code-ized, the control section connected to this signal input part, and the output section which outputs the telephone number to telephone by the command of this control section.

[0030] Moreover, according to the telephone number storage and the reader concerning invention of claim 5 By having had the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store in telephone number storage and a reader according to claim 1, and carries out digital display of the telephone number He can display the telephone number which this telephone number reader read into about [ that an operation of invention of claim 1 and the same operation can be done so ], and said telephone number reader, and can see and telephone this telephone number.

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**TECHNICAL FIELD**

[Field of the Invention] This invention relates to the telephone number storage and reader which is the combination configuration of telephone number stores, such as an electronic notebook, and an account reader of the telephone number like a bar code reader.

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EFFECT OF THE INVENTION

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[Effect of the Invention] Since the bar-code-ized telephone number is displayed on said telephone number display by having had the telephone number store which displays the telephone number by the bar code according to the telephone number storage and the reader concerning invention of claim 1 as explained above, others do not know this telephone number easily and security nature can be raised.

[0027] Moreover, according to the telephone number storage and the reader concerning invention of claim 2, in telephone number storage and a reader according to claim 1, the telephone number displayed by the bar code in said telephone number store is read, and telephone is operated. Actuation of telephoning becomes unnecessary, in order to read the telephone number by which the telephone number display of said telephone number store was bar-code-ized, to operate telephone and to call a partner with about [ that the effect of the invention of claim 1 and the same effectiveness can be done so by having had the telephone number reader which calls a partner ], and said telephone number reader.

[0028] Moreover, according to the telephone number storage and the reader concerning invention of claim 3, it sets to telephone number storage and a reader according to claim 1, and said telephone number storage is the key input section, It drives by the control section connected to this key input section, the driver which drives a telephone number display by the command of this control section, and this driver, and an operation of invention of claim 1 and the same operation can be done so by having had the telephone number display which bar-code-izes the telephone number and displays it, and the storage section which was connected to said control section and has memorized a name and the telephone number at least.

[0029] Moreover, according to the telephone number storage and the reader concerning invention of claim 4, in telephone number storage and a reader according to claim 2, said telephone number reader can do so an operation of invention of claim 2, and the same operation by having had the signal input part which reads the telephone number by which the telephone number display of said telephone number store was bar-code-ized, the control section connected to this signal input part, and the output section which outputs the telephone number to telephone by the command of this control section.

[0030] Moreover, the thing for which it had the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store in telephone number storage and a reader according to claim 1, and carries out digital display of the telephone number according to the telephone number storage and the reader concerning invention of claim 5 He can display the telephone number which this telephone number reader read into about [ that an operation of invention of claim 1 and the same operation can be done so ], and said telephone number reader, and can see and telephone this telephone number.

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**PRIOR ART**

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[Description of the Prior Art] Conventionally, according to the electronic notebook as telephone number storage, the telephone number inputted into this electronic notebook was displayed numerically.

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] However, if it was in the above-mentioned Prior art, since the telephone number inputted into the electronic notebook was displayed numerically, others might get to know this telephone number easily, and the trouble of being scarce was in security nature.

[0005] The place which accomplishes this invention paying attention to the above-mentioned trouble, and is made into that purpose is to offer the telephone number storage and reader which bar-code-izes the telephone number, displays it, is not easily known by others in this telephone number, and raised security nature.

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MEANS

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[Means for Solving the Problem] In order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 1 are characterized by having the telephone number storage which displays the telephone number by the bar code.

[0007] Since the bar-code-ized telephone number is displayed on said telephone number display by this configuration, others do not know this telephone number easily and security nature improves by it.

[0008] Moreover, in order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 2 were equipped with the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store, operates telephone, and calls a partner in telephone number storage and a reader according to claim 1.

[0009] Actuation of telephoning becomes unnecessary, in order to read the telephone number by which the telephone number display of said telephone number store was bar-code-ized, to operate telephone and to call a partner by this configuration with about [ that an operation of invention of claim 1 and the same operation can be done so ], and said telephone number reader.

[0010] In order to attain the above-mentioned purpose, moreover, the telephone number storage and reader concerning invention of claim 3 In telephone number storage and a reader according to claim 1 said telephone number storage The key input section, The control section connected to this key input section, and the driver which drives a telephone number display by the command of this control section, It drove by this driver and had the telephone number display which bar-code-izes the telephone number and displays it, and the storage section which was connected to said control section and has memorized a name and the telephone number at least.

[0011] By this configuration, an operation of invention of claim 1 and the same operation can be done so.

[0012] Moreover, in order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 4 were equipped with the signal input part where said telephone number reader reads the telephone number by which the telephone number display of said telephone number store was bar-code-ized, the control section connected to this signal input part, and the output section which outputs the telephone number to telephone by the command of this control section in telephone number storage and a reader according to claim 2.

[0013] By this configuration, an operation of invention of claim 2 and the same operation can be done so.

[0014] Moreover, in order to attain the above-mentioned purpose, the telephone number storage and reader concerning invention of claim 5 were equipped with the telephone number reader which reads the telephone number displayed by the bar code in said telephone number store, and carries out digital display of the telephone number in telephone number storage and a reader according to claim 1.

[0015] By this configuration, he can display the telephone number which this telephone number reader read into about [ that an operation of invention of claim 1 and the same operation can be

done so ], and said telephone number reader, and can see and telephone this telephone number.  
[0016]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained based on a drawing. The perspective view of the telephone number storage and reader concerning this invention in drawing 1 , the block diagram of the internal configuration of the telephone number storage and reader concerning this invention in drawing 2 , and drawing 3 are the perspective views of the telephone number storage of the telephone number storage and reader concerning this invention.

[0017] The identifier display 2 to which the electronic notebook 1 as telephone number storage in the telephone number storage and reader concerning this invention changes from a liquid crystal screen to the surface section, the telephone number display 3 which consists of a liquid crystal screen and indicates the telephone number by the bar code, and the control unit 4 for data inputs are formed.

[0018] And the electronic notebook 1 is equipped with the key input section which is the control unit 4 for data inputs, the control section 5 which consists of microcomputers, the driver 6 which drives the identifier display 2 and the telephone number display 3 by the command of this control section 5, and the identifier display 2 and the telephone number display 3 driven by this driver 6, and the storage section (memory, such as IC) 7 which has memorized the telephone number etc. is connected to said control section 5.

[0019] A bar code with the combination of the bar and tooth space where sizes differ Express a figure in a decipherable form mechanically, for example, one unit (module) of a white bar is set to 0. There are an approach (JAN symbol) of setting one unit (module) of a black bar to 1, and expressing a single digit in the combination of 0 and 1 of seven units in total, the approach (NW-7) of not being concerned with black and white, but setting a thin bar to 0, setting a \*\* bar to 1, and expressing one character with a total of seven bars, etc.

[0020] Moreover, the bar code reader 8 as a telephone number reader of telephone number storage and a reader is equipped with the signal input part 9 which reads the telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized, and does the signal input of this, the control section 10 connected to this signal input part 9, and the output section 11 which outputs the telephone number by the command of this control section 10, and this output section 11 is connected to telephone 12 in code 13. In addition, this bar code reader 8 may be built in telephone 12.

[0021] Next, combination with telephone explains actuation of the telephone number storage and reader constituted as mentioned above.

[0022] By operating the key input section which is the control unit 4 for data inputs of said electronic notebook 1, a control section 5 is operated, the name and the telephone number which the storage section 7 is made to have memorized by the command of this control section 5 are called, a driver 6 is driven, and the telephone number is indicated by the bar code at the telephone number display 3 which changes a name from a liquid crystal screen to the identifier display 2 which consists of a liquid crystal screen.

[0023] Next, the telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized is read with a bar code reader 8, the signal input of this is carried out in a signal input part 9, and the telephone number is outputted to telephone 12 from the output section 11 by the command of the control section 10 connected to this signal input part 9. And telephone 12 operates and a partner is called.

[0024] Since the bar-code-ized telephone number is displayed on the telephone number display 3 of said electronic notebook 1 according to the above-mentioned gestalt of operation It is not easily known by others, and security nature improves, and this telephone number with moreover, the bar code reader 8 The telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized is read, and actuation of telephoning becomes unnecessary, in order to operate telephone 12 and to call a partner.

[0025] In addition, with the above-mentioned gestalt of operation, the telephone number by which the telephone number display 3 of said electronic notebook 1 was bar-code-ized is read with a bar code reader 8. Although carry out the signal input of this in a signal input part 9, the

telephone number is outputted to telephone 12 from the output section 11 by the command of the control section 10 connected to this signal input part 9, telephone 12 operates and the partner was called As the telephone number which sounded dial tone from said electronic notebook 1, and you may make it telephone from the earphone of telephone 12, and this bar code reader 8 read into said bar code reader 8 is displayed, this telephone number is seen, and you may make it telephone.

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**DESCRIPTION OF DRAWINGS**

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[Brief Description of the Drawings]

[Drawing 1] It is the perspective view of the telephone number storage and reader concerning this invention.

[Drawing 2] It is the block diagram of the internal configuration of the telephone number storage and reader concerning this invention.

[Drawing 3] It is the perspective view of the telephone number storage of the telephone number storage and reader concerning this invention.

[Description of Notations]

1 Electronic Notebook (Telephone Number Storage)

4 Control Unit for Data Inputs (Key Input Section)

5 Control Section

6 Driver

7 Storage Section

8 Bar Code Reader (Telephone Number Reader)

9 Signal Input Part

10 Control Section

11 Output Section

12 Telephone

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[Translation done.]

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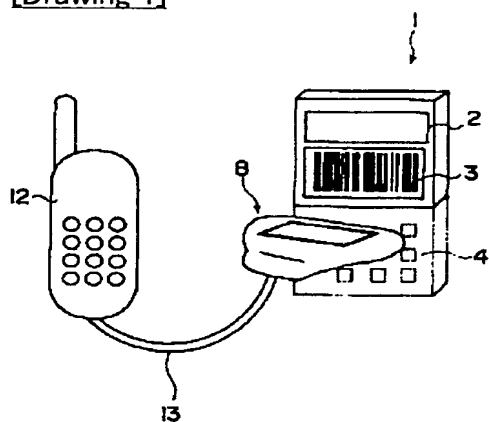
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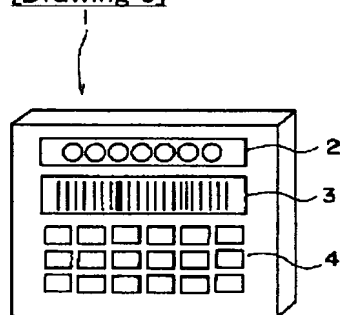
DRAWINGS

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[Drawing 1]

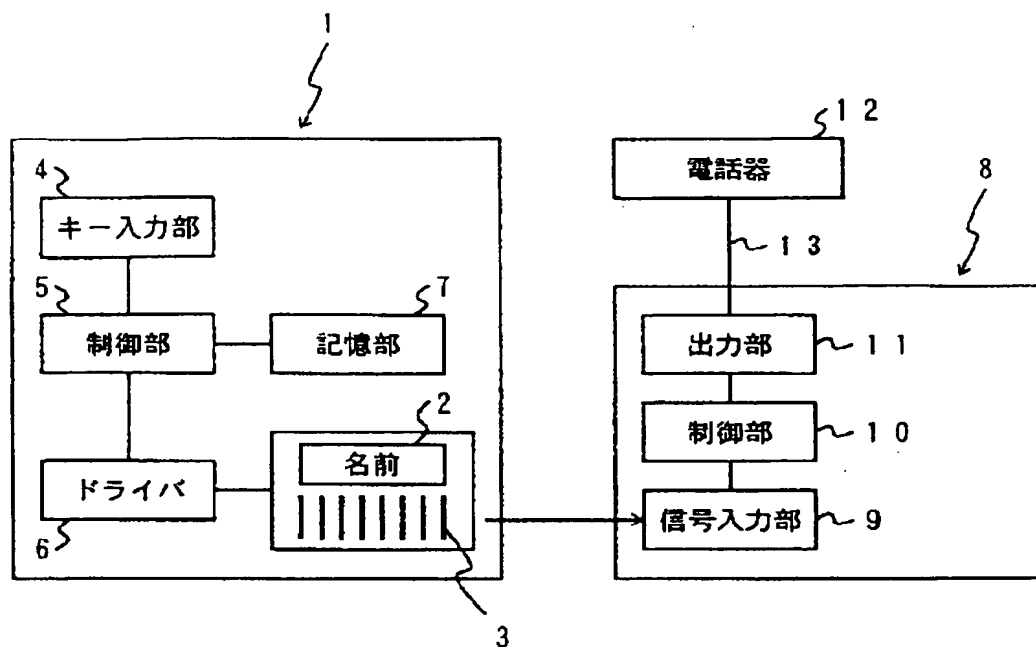


[Drawing 3]



[Drawing 2]





- 1 電子手帳 (電子番号記憶装置)
- 4 データ入力用操作部 (キー入力部)
- 5 制御部
- 6 ドライバ
- 7 記憶部
- 8 バーコードリーダー (電話番号読取り装置)
- 9 信号入力部
- 10 制御部
- 11 出力部
- 12 電話器

[Translation done.]

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(11)特許出願公開番号

特開平9-149117

(43)公開日 平成9年(1997)6月6日

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G 0 6 F 15/02	3 1 5		G 0 6 F 15/02	3 1 5 L
	3 5 5			3 5 5 Z
G 0 6 K 7/10		7429-5B	G 0 6 K 7/10	R
H 0 4 M 1/21			H 0 4 M 1/21	A
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(71)出願人 000002945

オムロン株式会社

京都府京都市右京区花園土堂町10番地

(72)発明者 岸 成信

京都府京都市右京区花園土堂町10番地 オムロン株式会社内

(72)発明者 米澤 達氏

京都府京都市右京区花園土堂町10番地 オムロン株式会社内

(72)発明者 木下 政宏

京都府京都市右京区花園土堂町10番地 オムロン株式会社内

(74)代理人 弁理士 青木 輝夫

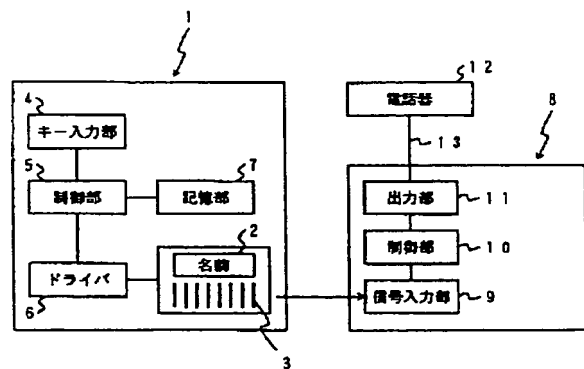
最終頁に続く

(54)【発明の名称】 電話番号記憶・読取り装置

(57)【要約】

【課題】 電子手帳に入力されている電話番号は数字で表示されていたために、この電話番号を他人に容易に知られる可能性があり、セキュリティ性に乏しいという問題点があった。

【解決手段】 電子手帳1のデータ入力用操作部4を操作することにより、制御部5を作動させて、この制御部5の指令により記憶部7に記憶させてある氏名と電話番号とを呼び出し、ドライバ6を駆動して液晶画面から成る名前表示部2に氏名を、液晶画面から成る電話番号表示部3に電話番号をバーコード表示し、バーコードリーダー8で、前記電子手帳1の電話番号表示部3のバーコード化された電話番号を読取り、これを信号入力部9に接続された制御部10の指令により出力部11より電話番号を電話機12に出力して、電話機12で相手を呼び出すようにした。



- 1 電子手帳 (電子番号記憶装置)
- 4 データ入力用操作部 (キー入力部)
- 5 制御部
- 6 ドライバ
- 7 記憶部
- 8 バーコードリーダー (電話番号読取り装置)
- 9 信号入力部
- 10 制御部
- 11 出力部
- 12 電話機

## 【特許請求の範囲】

【請求項 1】 電話番号をバーコードで表示する電話番号記憶装置を備えたことを特徴とする電話番号記憶・読取り装置。

【請求項 2】 前記電話番号記憶装置におけるバーコードで表示された電話番号を読み取って電話機を作動して相手を呼び出す電話番号読取り装置を備えた請求項 1 記載の電話番号記憶・読取り装置。

【請求項 3】 前記電話番号記憶装置が、キー入力部と、このキー入力部に接続された制御部と、この制御部の指令により電話番号表示部を駆動するドライバと、このドライバにより駆動されて電話番号をバーコード化して表示する電話番号表示部と、前記制御部に接続されて少なくとも氏名及び電話番号を記憶している記憶部とを備えた請求項 1 記載の電話番号記憶・読取り装置。

【請求項 4】 前記電話番号読取り装置が、前記電話番号記憶装置の電話番号表示部のバーコード化された電話番号を読取る信号入力部と、この信号入力部に接続された制御部と、この制御部の指令により電話番号を電話機に出力する出力部とを備えた請求項 2 記載の電話番号記憶・読取り装置。

【請求項 5】 前記電話番号記憶装置におけるバーコードで表示された電話番号を読み取って電話番号を数字表示する電話番号読取り装置を備えた請求項 1 記載の電話番号記憶・読取り装置。

## 【発明の詳細な説明】

## 【0001】

【発明の属する技術分野】本発明は、電子手帳等の電話番号記憶装置とバーコードリーダーのような電話番号読取り装置との組み合わせ構成である電話番号記憶・読取り装置に関するものである。

## 【0002】

【従来の技術】従来、電話番号記憶装置としての電子手帳によれば、この電子手帳に入力されている電話番号は数字で表示されていた。

## 【0004】

【発明が解決しようとする課題】しかしながら、上記従来の技術にあっては、電子手帳に入力されている電話番号は数字で表示されていたために、この電話番号を他人に容易に知られる可能性があり、セキュリティ性に乏しいという問題点があった。

【0005】本発明は、上記の問題点に着目して成されたものであって、その目的とするところは、電話番号をバーコード化して表示して、この電話番号を他人に容易に知られることがなくセキュリティ性を向上させた電話番号記憶・読取り装置を提供することにある。

## 【0006】

【課題を解決するための手段】上記の目的を達成するために、請求項 1 の発明に係わる電話番号記憶・読取り装置は、電話番号をバーコードで表示する電話番号記憶装

置を備えたことを特徴とする。

【0007】かかる構成により、前記電話番号表示部にはバーコード化された電話番号が表示されるために、この電話番号を他人に容易に知られることがなく、セキュリティ性が向上する。

【0008】また、上記の目的を達成するために、請求項 2 の発明に係わる電話番号記憶・読取り装置は、請求項 1 記載の電話番号記憶・読取り装置において、前記電話番号記憶装置におけるバーコードで表示された電話番号を読み取って電話機を作動して相手を呼び出す電話番号読取り装置を備えた。

【0009】かかる構成により、請求項 1 の発明の作用と同様な作用を奏し得るばかりか、前記電話番号読取り装置で、前記電話番号記憶装置の電話番号表示部のバーコード化された電話番号を読取り、電話機を作動して相手を呼び出すために、電話をかけるという操作が不要になる。

【0010】また、上記の目的を達成するために、請求項 3 の発明に係わる電話番号記憶・読取り装置は、請求項 1 記載の電話番号記憶・読取り装置において、前記電話番号記憶装置が、キー入力部と、このキー入力部に接続された制御部と、この制御部の指令により電話番号表示部を駆動するドライバと、このドライバにより駆動されて電話番号をバーコード化して表示する電話番号表示部と、前記制御部に接続されて少なくとも氏名及び電話番号を記憶している記憶部とを備えた。

【0011】かかる構成により、請求項 1 の発明の作用と同様な作用を奏し得る。

【0012】また、上記の目的を達成するために、請求項 4 の発明に係わる電話番号記憶・読取り装置は、請求項 2 記載の電話番号記憶・読取り装置において、前記電話番号読取り装置が、前記電話番号記憶装置の電話番号表示部のバーコード化された電話番号を読取る信号入力部と、この信号入力部に接続された制御部と、この制御部の指令により電話番号を電話機に出力する出力部とを備えた。

【0013】かかる構成により、請求項 2 の発明の作用と同様な作用を奏し得る。

【0014】また、上記の目的を達成するために、請求項 5 の発明に係わる電話番号記憶・読取り装置は、請求項 1 記載の電話番号記憶・読取り装置において、前記電話番号記憶装置においてバーコードで表示された電話番号を読み取って電話番号を数字表示する電話番号読取り装置を備えた。

【0015】かかる構成により、請求項 1 の発明の作用と同様な作用を奏し得るばかりか、前記電話番号読取り装置に、この電話番号読取り装置が読み込んだ電話番号を表示して、この電話番号を見て電話することができる。

## 【0016】

【発明の実施の形態】以下、本発明の実施の形態を図面に基づいて説明する。図 1 は本発明に係わる電話番号記憶・読取り装置の斜視図、図 2 は本発明に係わる電話番号記憶・読取り装置の内部構成のブロック図、図 3 は本発明に係わる電話番号記憶・読取り装置の電話番号記憶装置の斜視図である。

【0017】本発明に係わる電話番号記憶・読取り装置における電話番号記憶装置としての電子手帳 1 は、その表面部に、液晶画面から成る名前表示部 2 と、液晶画面から成って電話番号をバーコード表示する電話番号表示部 3 と、データ入力用操作部 4 とが設けてある。

【0018】そして、電子手帳 1 は、データ入力用操作部 4 であるキー入力部と、マイクロコンピュータから構成される制御部 5 と、この制御部 5 の指令により名前表示部 2 及び電話番号表示部 3 を駆動するドライバ 6 と、このドライバ 6 により駆動される名前表示部 2 及び電話番号表示部 3 とを備えており、前記制御部 5 には電話番号等を記憶している記憶部（IC 等のメモリ）7 が接続してある。

【0019】バーコードは、太さの異なるバーとスペースとの組み合わせにより、数字を機械的に解読可能な形に表現したものであり、例えば、白バーの 1 単位（モジュール）を 0 とし、黒バーの 1 単位（モジュール）を 1 として合計で 7 単位の 0 と 1 の組み合わせで 1 桁の数字を表現する方法（JAN シンボル）や、白黒に関わらず細バーを 0、太バーを 1 として合計 7 本のバーで 1 キャラクタを表現する方法（NW-7）等がある。

【0020】また、電話番号記憶・読取り装置の電話番号読取り装置としてのバーコードリーダー 8 は、前記電子手帳 1 の電話番号表示部 3 のバーコード化された電話番号を読み取りこれを信号入力する信号入力部 9 と、この信号入力部 9 に接続された制御部 10 と、この制御部 10 の指令により電話番号を出力する出力部 11 とを備えており、この出力部 11 は電話機 12 にコード 13 により接続してある。なお、このバーコードリーダー 8 を電話機 12 に内蔵してもよい。

【0021】次に、上記のように構成された電話番号記憶・読取り装置の作動を、電話機との組み合わせで説明する。

【0022】前記電子手帳 1 のデータ入力用操作部 4 であるキー入力部を操作することにより、制御部 5 を作動させて、この制御部 5 の指令により記憶部 7 に記憶させてある氏名と電話番号とを呼び出しドライバ 6 を駆動して、液晶画面から成る名前表示部 2 に氏名を、液晶画面から成る電話番号表示部 3 に電話番号をバーコード表示する。

【0023】次に、バーコードリーダー 8 で、前記電子手帳 1 の電話番号表示部 3 のバーコード化された電話番号を読み取り、これを信号入力部 9 に信号入力し、この信号入力部 9 に接続された制御部 10 の指令により出力部

11 より電話番号を電話機 12 に出力する。そして、電話機 12 が作動して相手を呼び出す。

【0024】上記した実施の形態によれば、前記電子手帳 1 の電話番号表示部 3 にはバーコード化された電話番号が表示されるために、この電話番号を他人に容易に知られることがなく、セキュリティ性が向上するし、また、バーコードリーダー 8 で、前記電子手帳 1 の電話番号表示部 3 のバーコード化された電話番号を読み取り、電話機 12 を作動して相手を呼び出すために、電話をかけるという操作が不要になる。

【0025】なお、上記した実施の形態では、バーコードリーダー 8 で、前記電子手帳 1 の電話番号表示部 3 のバーコード化された電話番号を読み取り、これを信号入力部 9 に信号入力し、この信号入力部 9 に接続された制御部 10 の指令により出力部 11 より電話番号を電話機 12 に出力して、電話機 12 が作動して相手を呼び出すようにしたが、前記電子手帳 1 から発信音を鳴らし電話機 12 の受話器から電話をかけるようにしてもよいし、また、前記バーコードリーダー 8 に、このバーコードリーダー 8 が読み込んだ電話番号を表示するようにして、この電話番号を見て電話するようにしてもよい。

【0026】

【発明の効果】以上説明したように、請求項 1 の発明に係わる電話番号記憶・読取り装置によれば、電話番号をバーコードで表示する電話番号記憶装置を備えたことにより、前記電話番号表示部にはバーコード化された電話番号が表示されるために、この電話番号を他人に容易に知られることがなく、セキュリティ性を向上させることができる。

【0027】また、請求項 2 の発明に係わる電話番号記憶・読取り装置によれば、請求項 1 記載の電話番号記憶・読取り装置において、前記電話番号記憶装置におけるバーコードで表示された電話番号を読み取って電話機を作動して相手を呼び出す電話番号読取り装置を備えたことにより、請求項 1 の発明の効果と同様な効果を奏し得るばかりか、前記電話番号読取り装置で、前記電話番号記憶装置の電話番号表示部のバーコード化された電話番号を読み取り、電話機を作動して相手を呼び出すために、電話をかけるという操作が不要になる。

【0028】また、請求項 3 の発明に係わる電話番号記憶・読取り装置によれば、請求項 1 記載の電話番号記憶・読取り装置において、前記電話番号記憶装置が、キー入力部と、このキー入力部に接続された制御部と、この制御部の指令により電話番号表示部を駆動するドライバと、このドライバにより駆動されて電話番号をバーコード化して表示する電話番号表示部と、前記制御部に接続されて少なくとも氏名及び電話番号を記憶している記憶部とを備えたことにより、請求項 1 の発明の作用と同様な作用を奏し得る。

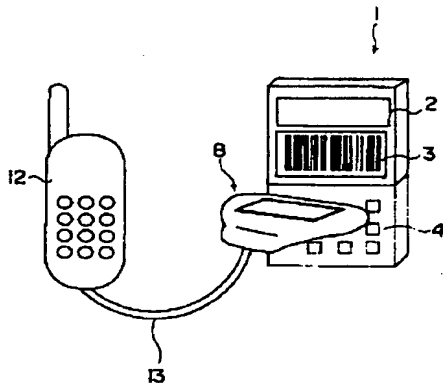
【0029】また、請求項 4 の発明に係わる電話番号記

憶・読取り装置によれば、請求項 2 記載の電話番号記憶・読取り装置において、前記電話番号読取り装置が、前記電話番号記憶装置の電話番号表示部のバーコード化された電話番号を読取る信号入力部と、この信号入力部に接続された制御部と、この制御部の指令により電話番号を電話機に出力する出力部とを備えたことにより、請求項 2 の発明の作用と同様な作用を奏し得る。

【0030】また、請求項 5 の発明に係わる電話番号記憶・読取り装置によれば、請求項 1 記載の電話番号記憶・読取り装置において、前記電話番号記憶装置におけるバーコードで表示された電話番号を読み取って電話番号を数字表示する電話番号読取り装置を備えたことにより、請求項 1 の発明の作用と同様な作用を奏し得るばかりか、前記電話番号読取り装置に、この電話番号読取り装置が読み込んだ電話番号を表示して、この電話番号を見て電話することができる。

【図面の簡単な説明】

【図 1】



【図 1】本発明に係わる電話番号記憶・読取り装置の斜視図である。

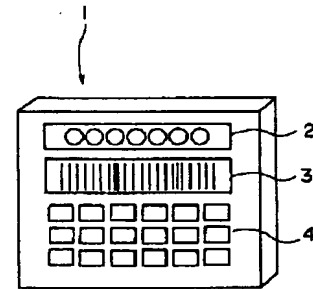
【図 2】本発明に係わる電話番号記憶・読取り装置の内部構成のブロック図である。

【図 3】本発明に係わる電話番号記憶・読取り装置の電話番号記憶装置の斜視図である。

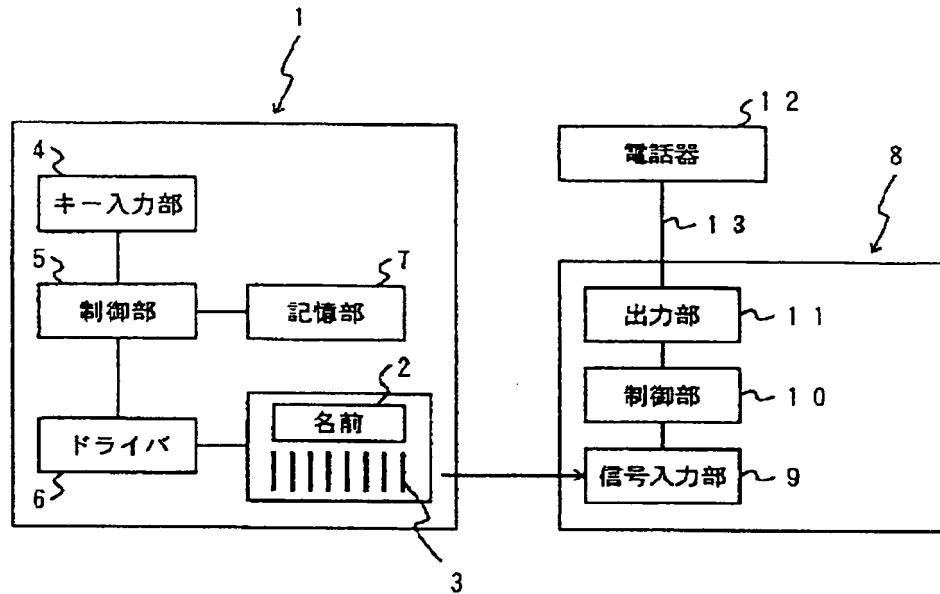
【符号の説明】

- 1 電子手帳（電話番号記憶装置）
- 4 データ入力用操作部（キー入力部）
- 5 制御部
- 6 ドライバ
- 7 記憶部
- 8 バーコードリーダー（電話番号読取り装置）
- 9 信号入力部
- 10 制御部
- 11 出力部
- 12 電話機

【図 3】



【図2】



- 1 電子手帳（電子番号記憶装置）
- 4 データ入力用操作部（キー入力部）
- 5 制御部
- 6 ドライバ
- 7 記憶部
- 8 バーコードリーダー（電話番号読取り装置）
- 9 信号入力部
- 10 制御部
- 11 出力部
- 12 電話器

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技術表示箇所

(72)発明者 佐々木 俊吉  
京都府京都市右京区花園土堂町10番地 オ  
ムロン株式会社内